

Remarks

I. Introduction

This is in response to the Office Action dated January 21, 2004. The Office Action rejected claims 1-8 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1-11, 13-18 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,195,622 (Altschuler et al.) in view of U.S. Patent No. 6,396,842 (Rochberger). Claims 12 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Altschuler et al. and Rochberger further in view of U.S. Patent No. 6,192,417 (Block et al.).

In response to the §112 rejection, applicants have amended claims 2 and 8. Applicants traverse the rejection under §103. Claims 1-20 remain for consideration.

II. §112 Rejection

Claims 1-8 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More particularly, claim 2 was rejected because the term “the plurality of client IP addresses” lacked antecedent basis. Claim 8 was rejected because the term “the common longest prefix” lacked antecedent basis. In response, Applicants have amended claims 2 and 8 to remove the antecedent basis problems. Withdrawal of these rejections is requested.

Further, claim 1 was rejected because “it is not clear who is receiving a plurality of IP addresses”. The claim step of “receiving” is one of the method step limitations, similar to the steps of “processing” and “classifying”. These steps define the claimed invention as set forth in claim 1, and there is no requirement of specifying “who” is performing the claimed steps. As such, Applicants request withdrawal of this rejection.

Claim 2 was rejected because “it is uncertain whether the plurality of client IP addresses refers to a plurality of IP addresses in claim 1, line 3. Applicants believe that the claim amendment to claim 2 addresses this rejection. As such, Applicants request withdrawal of this rejection.

Having amended the claims, Applicants believe that all claims comply with §112. Withdrawal of all §112 rejections is respectfully requested.

III. §103 Rejection

Claims 1-11, 13-18 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Altschuler et al. in view of Rochberger. Claims 12 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Altschuler et al. and Rochberger further in view of Block et al.

Applicants traverse the rejections under §103.

Independent claim 1 is directed to an on-line method of classifying IP addresses into related clusters within a distributed information network. None of the cited references, either alone or in combination, disclose the subject matter of claim 1. Claim 1 contains the steps of “receiving a plurality of IP addresses”, “processing the plurality of IP addresses...” and “classifying the plurality of IP addresses into related clusters”. The Office Action relies on Altschuler et al. as disclosing these limitations. A significant distinction between the invention of claim 1 and Altschuler et al. is that Altschuler et al. does not disclose the claimed method steps in connection with **IP addresses**. The cited sections of Altschuler et al. are generally directed to User ID’s which are not the same as the IP addresses of the present invention. As disclosed in Altschuler et al. at col. 8, lines 13-32, a “user ID ... is a data structure which permits a server to distinguish, though not necessarily identify, different clients”. Altschuler et al. then goes on to indicate that the user IDs may be “cookies”, as that term is known in the art. Thus, the user ID of Altschuler et al. is very different from the IP addresses as used in claim 1. As is well known in the art, an IP address allows the identification of addresses on the internet, which is very different from the user ID of Altschuler et al.

This distinction between IP addresses and user IDs is significant and renders claim 1 allowable over the cited art. The sections of Altschuler et al. cited in the Office Action with respect to the “processing” and “classifying” steps of claim 1 are generally related to the processing and clustering of user IDs, and not to the processing and classifying of IP addresses as claimed. Since the clustering of user IDs does not disclose the claimed classifying of IP addresses, claim 1 is allowable over the cited art. The mere

clustering of one type of data entity (e.g., user IDs) does not suggest the clustering of other types of data elements (e.g., IP addresses) without an explicit suggestion that the clustering should apply to the other type of data element. Since Altschuler et al. does not contain such an explicit suggestion, it cannot be used to render claim 1 obvious. While it is recognized that the cited section of Altschuler et al. at col. 22, line 57 does mention the term “internet address”, this passing mention does not change the conclusion that Altschuler et al. is mainly directed to classifying user IDs.

Further, the Office Action admits that Altschuler et al. does not disclose the claimed limitation of “processing the plurality of IP addresses **according to a radix encoded trie classification process**”. The Office Action relies on Rochberger to supply the missing disclosure. While Rochberger mentions a radix search tree, there would be no motivation to combine Altschuler et al. with Rochberger such that classifications could be made utilizing a radix encoded trie classification process. Such a combination is based on hindsight and is therefore improper. The Federal Circuit case law makes clear that the best defense against an improper hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references. In re Dembiczak, 175 F.3d 994, 999 (Fed. Cir. 1999). There is no such teaching or motivation to combine in the Rochberger or Altschuler et al., and therefore such a combination is improper.

For the above reasons, claim 1 is allowable over the cited art.

Independent claims 5 and 17 are also allowable over the cited art. Claims 5 and 17 contain the limitations of “extracting client IP addresses from a collection of IP addresses” and “extracting at least one IP address” respectively. The Office Action fails to address these limitation, and therefore the Office Action has failed to show prima facie obviousness. The withdrawal of the rejections of these claims is therefore requested. The Office Action states that claims 5 and 17 are rejected for the same reasons as claim 1. However, claim 1 does not contain these “extracting” limitations. If the Examiner persists in the rejection of claims 5 and 17, Applicants respectfully request that the Examiner specifically address these claim limitations. In addition, claims 5 and 17 are allowable for the same reasons as discussed above in connection with claim 1, namely the

distinction between IP addresses and user IDs, and the lack of motivation to combine Altschuler et al. and Rochberger.

Independent claim 8 is allowable for the same reasons as discussed above in connection with claim 1, namely the distinction between IP addresses and user IDs, and the lack of motivation to combine Altschuler et al. and Rochberger.

For the reasons discussed above, all independent claims are allowable over the cited art. Allowance of all independent claims is requested.

All remaining dependent claims are dependent upon an allowable independent claim and are therefore also allowable. These dependent claims are also allowable because they add additional allowable subject matter as follows.

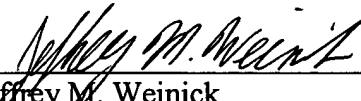
Dependent claim 6 contains the limitation that “client IP addresses are extracted in real time from a network server”. The Office Action cites Altschuler et al. at fig. 1; col. 8, lines 13-31 as disclosing this “real time” limitation. However, the cited section does not disclose the real time extraction of client IP addresses. Therefore, claim 6 is allowable over the cited art.

Dependent claims 13 – 16 and 20 add limitations relating to further details of the retrie, retrie levels, and radix encoded trie. The Office Action fails to address these limitations, and therefore the Office Action has failed to show prima facie obviousness. The withdrawal of the rejections of these claims is therefore requested. The Office Action states that these claims are rejected for the same reasons as claim 1. However, claim 1 does not contain the limitations in these claims. If the Examiner persists in the rejection of these claims, Applicants respectfully request that the Examiner specifically address these claim limitation.

IV. Conclusion

For the reasons discussed above, all pending claims are allowable over the cited art. Reconsideration and allowance of all claims is respectfully requested.

Respectfully submitted,



Jeffrey M. Weinick
Reg. No. 36,304
Attorney for Applicant
Tel.: 973-533-1616

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AT&T Corp.
Room 2A-207
One AT&T Way
Bedminster, NJ 07921